Introductory lecture
upon the method of studying
medicine.

Delivd Novr 4. 1811.

Gentlemen!

It is now more than half a Century ~~fifty years~~ since I began the study, ~~of medicine~~, and upwards of forty years since I entered upon the practice of ~~it~~ medicine. During these periods I have had frequent opportunities of observing the influence of the different modes of acquiring a knowledge of medicine ~~by~~ upon its practice in a great number of physicians. The result of these observations shall now be laid before you as the subject of an introductory lecture. Before I enter upon the detail of the studies which are proper to to qualify a person to practice medicine, and the order in which they should be pursued,

I shall remark that I consider you as prepared for the study of medicine by a previous acquaintance ~~of~~ with all the branches of knowledge mentioned in a former lec-ture particularly with ~~the principles of~~ grammar; ~~and~~ modern languages, geography, mathematics & natural philosophy; ~~these sciences are the only ones that lead to~~ ~~the temple of medicine. but no man enter~~ ~~it a knowledge of sciences is indispensably~~ without some knowledge of each of ~~these~~ which you will ~~have~~ ~~to com-prehend~~ be unable ~~to comprehend~~ to com-prehend the different branches of the science of medicine. ~~When duly entered~~ ~~with them he should enter first upon~~ ~~the~~ These branches may be divided into means and ends. To the former belong anatomy, physiology, chemistry, natural history

and materia medica. The latter embrace the practice of medicine, surgery and midwifery. —

~~The study of~~ Anatomy should form the corner stone of a medical education. A minute knowledge of it is ~~absolutely~~ indispensably necessary to constitute the physician, the surgeon and the man midwife. ~~This subject~~ Some parts of this science are more important than others but every portion of it should be committed to memory by the student of medicine. It is true, ~~they will~~ many of them will pass out of ~~the~~ his mind when ~~a physician~~ he enters into business, but such a general knowledge of them will always remain, as to prevent his committing mistakes of ignorance in his practice. The acquaintance with Anatomy ~~can~~ should

be acquired in three ways - 1st by attending public Demonstrations and lectures upon the ~~of the component parts of the body~~, 2dly by dissecting dead bodies, and 3dly by making representations in wax, or by drawings ~~preparations of such parts~~ of the different parts of the body. Do not expect Gentlemen to become Anatomists ~~by~~ in any other way than by those which have been mentioned. Books convey an imperfect knowledge of the human body, ~~the~~ even the bodies of brutes are insufficient for this purpose. - ~~They~~ crowd around the Chair then, Gentlemen of the Professor of Anatomy, ~~sit down~~ pass hours and days in his dissecting room, - ~~make body part of the human body familiar to~~ call upon the sense of touch to assist the eye in remembering every part of the human body, - acquire a familiarity with the dissecting

knife. ~~and facility in using it~~. It will
serve ~~to wear away the~~ to prepare you for
cutting living flesh by wearing away the
natural ~~humidity~~ repugnance of the human heart to
such an employment, and it will ~~and to~~
impart dexterity to your hand in ~~using~~
performing surgical operations. Dissections
~~of and~~ ~~poor bags~~ in wax and Drawings of the ~~Viscera & blood vessels~~,
~~and a of all the~~ different ~~bodies~~ parts of the
body will impress them more deeply
upon your Memories. ~~as~~ They will
serve further ~~when~~ by a glance of your
eye to revive your knowledge of those parts
~~of~~ when you enter into practice, and when
they cease to be useful ~~to you~~, you will
view them with pleasure as the monuments
of your youthful taste and ingenuity.

Connected with Anatomy, should be

the Study of Physiology, that is an explanation ~~of the~~ as far as it is practicable, of the uses of the different parts of the body. Simple Anatomy, or the nomenclature of bones, muscles, blood vessels, nerves and viscera may be ~~considered~~ compared to the alphabet. It is by means of ~~alphab~~ physiology that this alphabet is converted into a language which becomes the vehicle of ideas and principles, or to make use of another simile, Anatomy ~~resembles~~ may be compared to the outlines of a portrait perfectly correct in its size and figure, while physiology assembles the hand that gives it its ~~colouring~~ drapery & counte=nance. What is there in the shape of the lungs or the heart capable of affording pleasure to a Student of medicine when viewed in the thorax, or upon a table? In vain does the anatomist endeavour to fix his attention upon either of them by simply

naming their various parts. But when he tells ~~you~~ him the lungs are the channel into which the stimulus of air is poured in order to set the whole animal machine in motion - that this air furnishes a principle which enables ~~the~~ every ~~many sentient & irritable~~ part of the body to assume ~~what~~ a capacity of life, and that the lungs convey out of the body, certain matters which if retained, would bring on disease and death, ~~you no longer~~ he no longer ~~view~~ beholds them with indifference. ~~you~~ he examines their structure, not only with ~~your~~ his eye but with ~~your~~ his hand, and ~~you~~ incorporates the important uses that have been assigned to them with their structure - to ~~time~~ that he never forgets either of them. ~~The Hardest~~ The same remark applies

to the heart. Viewed simply with its auricles, ventricles ~~and~~ valves and blood vessels, it has nothing to recommend it to our notice, but when contemplated as the ~~centre of~~ principal agent in the circulation of the blood, and thereby as the source of all the benefits derived from the distribution of that fluid ~~the blood~~ to every part of the body, and still more, when viewed ~~contemplated~~ as the seat of all our social, domestic and moral sensations, it becomes an object of immense curiosity & we behold it with wonder and delight. ~~and be~~ Time in vain attempts ~~in vain~~ to rob us of the knowledge of those uses, ~~from our memories~~, ~~for they are~~ for they occupy a place, not only in our memories, but in our understanding,

Though somewhat foreign to our Subject, it would be unjust to Physiology to pass over ~~it~~ in silence the friendly influence it has had in all ages upon Religion. By unfolding the Uses of the ~~compound~~ various parts of the body, it exhibits stronger marks of the wisdom, power & goodness of the Deity than are to be met with in any other of his material works. — ~~This~~ reverence for those divine Attributes ~~of the~~ is greatly increased by the details of the faculties and operations of the mind, which now compose a part of modern Systems of physiology. —

and affections. The whole mind must perish, before that knowledge can be completely obliterated from it. –

I might go on and show further that all ~~the~~ ~~the~~ the knowledge ~~of~~ a physician retains of the structure of ~~the~~ every other part of the body, and all the pleasure he ~~derives~~ enjoys from a review of it in every period of his life, is derived from a recollection of their uses. That this is the case is ~~obvious~~ evident from his so soon forgetting the structure of the brain. Even ~~to its~~ the ~~nomenclature~~ names of its ~~different~~ constituent parts pass out of his mind, ~~The~~ and for this obvious reason, ~~reasons of this~~ ~~is obvious. The~~ no uses have ~~have~~ as yet been ~~assigned~~ assigned to them. ~~Though~~

Next to anatomy and physiology, the anatomy should engage the attention of

a student of medicine. This Science is eminently useful in various ways. ~~It~~ In the first place it furnishes a physician with some of the most powerful medicines, particularly with all the preparations of the metals, without which our profession would be useless ~~as~~ or impotent in many of the most formidable diseases. 2ly It teaches him ~~how~~ to administer them in such a way that their beneficial effects may not be defeated by ~~incompatibilities~~ decompositions ~~in the mode of preparing them~~ whether they are taken, or after they are received into the stomach, and lastly it furnishes ~~him~~ him with facts and principles which enable ~~him~~ him to ~~to~~ explain several ~~many~~ of the functions of the ~~healthy~~ body in health, and many of the

phenomena which are exhibited by diseases. To Chemistry we are indebted for an antidote to the venereal disease, – for ~~one~~ of the most active remedies for the yellow fever, for the most prompt emetics, for the most gentle, and ~~the~~ most powerful purges, ~~&~~ for the most certain diaphoretics – for our knowledge of one of the causes of animal heat – of the color of the blood, and of the cause of irritability & sensibility. many more useful remedies ~~probably remain to be discovered, by it~~ as well as many other of the phenomena of the healthy & morbid body probably remain to be ~~dis~~covered by it. ~~Co~~ It is the key of a Cabinet ~~of~~ which we have seen but a small part of its rich and beautiful contents. Cultivate this science therefore gentlemen with ~~apeti~~ avidity & zeal. Study

its principles and imitate its experiments. Be not satisfied with a single course of lectures upon it, and add to the instruction you will re=ceive ~~up~~ within these walls, by reading all ~~the new~~ the most popular publications ~~which~~ upon it.

With the study of Chemistry should be associated the study of natural history in which are included ~~the history of animals~~ a description of animals, fossils ~~animals~~ and plants. ~~To~~ It is impossible to be a physician without some knowledge of each of these sciences. The history of ani=mals ~~which~~ both in their living and dead states, will en=large your knowledge of physiology, and ~~the~~ ~~the knowledge~~ anatomy. ~~and from~~ From the history of fossils ~~and plants~~ you will derive ~~much~~ an acquaintance with the native state of many of our medicines, and from

a knowledge of plants you will derive not only many excellent medicines, but many facts and analogies that will enable you to explain several of the laws of the animal economy. Pursue these studies gentlemen with ardor. ~~Imitate the example~~ Adopt the zeal of the gentleman who has been appointed to teach them in this University. Follow him in his excursions to the neighbouring ~~woods~~ fields & woods in quest of ~~objects to~~ plants to illustrate the principles of the science of botany. ~~without~~ You will be amply repaid for ~~this~~ your labor ~~trouble~~, ~~if~~ in these studies, — ~~labor did any~~ — if that employment deserve the name of labor in which ~~there is no~~ such unbounded sources will be opened to you of knowledge, pleasure, and usefulness to mankind. —

Having ~~laid a foundation~~ made yourselves acquainted with Chemistry & natural histo=
=ry you will be ~~prepared to~~ qualified to pro=
=fit by the lectures upon the materia medica.
The objects of this science are the sensible qua=
=lities, the preparations, virtues and doses of medicines. ~~This~~
~~is a very useful and important part of~~
~~the the science of medicine~~. It includes further
not only what are commonly called medicines,
but the qualities and preparations, ~~and doses~~ of aliments
and drinks. Too much pains cannot be
taken in acquiring a knowledge of each
of them. They are the tools by which a
physician ~~builds up, and~~ takes down and builds up the
extremes of morbid ~~weakness~~ strength &
weakness in the human body. ~~They~~ The

qualities and mode of preparing aliments & drinks so as to suit them to all the different grades of acute and chronic diseases, should command your closest attention. It will be necessary for you to know not only in general how they are ~~prepared~~ made, but frequently to direct the mode of preparing them so as to render them at the same time pleasant and medicinal. So highly do I appreciate this supposed humble part of the ~~knowledge~~ education of a physician, that I have sometimes wished it were possible to place a ~~student of medicine~~ young man intended for the ~~study~~ profession of medicine ~~in a~~ under the direction of an able cook ~~cooking kitchen~~ for a few months before he enters upon his studies. ~~this~~ The want of ~~this~~ knowledge ~~thus~~ practically

acquired, can only be obtained by frequent conversations with experienced housekeepers, and ~~by~~ committing to ~~paper~~ memory, or to paper all the common formulas of the Diet and Drinks of sick people. —

I have thus gentlemen enumerated the ~~one~~ branches of medicine ~~Means of Studies~~ which are necessary to qualify a Student to enter upon the Study of the practical Branches of our Science. They are the means only of becoming a physician. ~~The Object of or ends of those means are the practice of physic, Surgery and Midwifery.~~

A ~~person~~ man may be a Winslow in Anatomy, a Haller in physiology, a Davy in chemistry & a Linnaeus in natural history, and yet be wholly ignorant of the ~~practice~~ end of those means, that is, the practice of physic, Surgery &c

midwifery. Many mistakes occur not only in medicine but in other objects of human pursuit from confounding ~~the~~ means and ends. Thus money is not food nor clothing, ~~but these languages are not knowledge,~~ but the means only of procuring them. Thus languages are not knowledge, but the ~~channels~~ means only ~~through~~ by which we acquire it. —

The practice of physic involves ~~some knowledge~~ it an acquaintance with the causes of diseases. These constitute what has been called patho=logy, or in other words the theory of medi=cine. By theory I understand a combination of facts arranged in a related order and reduced to ~~compact~~ dependance and cooperation with each other. In the inaugural lecture which I delivered

Theory ~~is the~~ may be compared to a rule which measures facts, ~~and establishes their relations~~ ~~and~~ to as form principles from them, while facts may be compared to a crucible which analyses ~~to test them~~ theories. In this manner, ~~they~~ mutually ~~support~~ establish the truth, or detect the errors of each other.

~~up~~ in the year 1791 upon entering upon the duties of the Chair which I now occupy in this University, I endeavored to show the intimate and necessary connection between theory and practice in Medicine. ~~That~~ I have not relaxed in a single title in the ~~have not abandoned~~ ~~I continue to hold the~~ opinions ~~which~~ expressed ~~I delivered~~ in that lecture. On the contrary I am more satisfied that ever, that without ~~the~~ theory or ~~observation and~~ reasoning in medicine, a man cannot be a physician. I know it is fashionable to ~~decry theory in medicine~~, ~~and~~ to extol facts or what is commonly called experience, at ~~the~~ the expense of theory, but facts & experience are as delusive in Medicine without theory, as theory is without facts. ~~This~~ Science may be compared to a tripod, the three feet of

It is only by both, that can be
made to combining them, they ~~mutually~~
establish the truth, or detect the errors
of each other. —

which are Observation, experiment and reasoning, or theory. It cannot stand upon any one, nor yet upon any two of them, but United, they mutually support each other. It is true the progress of our Science has been retarded by many erroneous theories, but it is equally true it has been more retarded by erroneous Observations and fallacious experiments. I cannot better illustrate the truth of this remark than by mentioning the advantages which our Science has derived from the labors of two men whose names are immortal in the history of medicine, I mean Dr Sydenham & Dr John Hunter. The former overthrew the theories of Ages by his faithful and accurate Descriptions of Diseases, while the latter exposed the fallacy of the hundreds of supposed facts by

But why do I plead for the Union of theory and practice in medicine? — They are already connected by an eternal, and immutable law in the ~~minds~~ human mind, ~~from~~ every effort to ~~separate~~ ~~with~~ them ~~is to~~ has been as unsuccessful as the late attempts of the Infidels ~~to~~ divide morals from Religion.

his theories, or in other words by his discovery of the laws of the animal Oeconomy, and the operation of medicines in the cure of this cases. Permit me to add further, that the physicians who attempt to divide theory & practice, aim at the same impossibility that the Infidels have lately done, who have attempted to divide morals from Religion. Theory & practice are connected by an eternal and immutable law in the human mind. "To think is to theorize" says Dr Darwin, and where is the man who can renounce or even for a moment, suspend this operation of his mental faculties? There never was a physician who did not in spite of himself, or who that prescribed a medicine without a secret indication of cure founded upon a theory of some kind. —

of his lectures. As a proof that the ~~[illegible]~~ obvious name of theory consists only in its novelty, it will not be improper to add that the same Edinburgh physicians who were devoted to Dr. Boerhaave's ~~[illegible]~~ lentor & morbid acrimony of the fluids, are now ~~[illegible]~~ zealously attached to Dr. Cullen's ~~[illegible]~~ theories of Spasm, putrefaction, the healing powers of Nature, and the sedative operation of ~~[illegible]~~ certain medicines].

In one of Moliere's ~~[illegible]~~ comedies entitled the "citizen turned gentleman", ~~[illegible]~~ a citizen applies to a professor of Rhetoric to be taught the principles of language. The professor begins by dividing all writings into verse & prose, and illustrating each of them by quotations, ~~[illegible]~~ the ~~[illegible]~~ one from the poets, - and the ~~[illegible]~~ other from the language of common conversation. The citizen no sooner heard the ~~[illegible]~~ illustration of

But there is another instance of self deception into which physicians who are opposed to theory insensibly glide without being conscious of it. It consists in hostility to such theories only as are new. This was exemplified in a remarkable manner in Edinburgh when Dr Cullen first taught that the proximate cause of diseases was to be sought for chiefly in the solids. His brethren, who were devoted to the humoral pathology of Dr Boerhaave complained of his theorizing, and for a while treated his opinions as the effusions of a wild & distempered imagination. The Doctor was not insensible of the inconsistency of their charges against him, and availing himself of the simplicity of his principles, declared that there was more theory in one page of Vanswieten's commentaries upon Dr. Boerhaave's aphorisms, than there was in a dozen of his lectures. As a proof that the obvious name of theory consisted only in its novelty, it may not be improper to add, that the Incupsors of those physicians in Edinr who opposed Dr Cullen's theories, now adhere ~~exclusively and~~ pertinaciously to them ~~to the exclusion of all the benefit of opium, pulse fraction, the healing power of Nature, and the sedative operation of certain medicines~~ modern principles in medicine ~~in short~~

the latter, than he discovered that he was in possession of the knowledge of it, and excited in the consciousness that he had been in the habit of speaking and writing prose in every part of his life. The same thing may be said of those physicians who are the enemies of theory. They are in the constant practice of exercising it without knowing it every time they prescribe for the cure of a dis=
=ease. —

In defending theory Gentlemen I have admitted many of them to be erroneous, but in doing so, I have conceded more than was just, for most of the theories that have existed in medicine are nothing but a collection of supposed facts. ~~For example~~ I shall illustrate the truth of this remark by a few examples. Dr Boerhaave's theory of fever is founded upon what he called

~~Fever is not only natural & involuntary in the minds of regular bred physicians, but even quacks do homage to it, & hence some redundant or acrid humor is to be evacuated, or obtunded, — some fluid is to be restrained, or accelerated in its course, or some part of the body is to be relaxed, or strengthened in all other prescriptions.~~

~~turn back to p. 3.~~

morbific matter ~~and lenter~~ in the blood.
~~Now this these are false facts if I may be~~
~~allowed the expression~~ This matter he supposed
was expelled in the sweats, and sediment in the
Urine which take place in the Crises of fevers.
~~Now~~ Now this is a false fact if I may be allow=
=d the expression, for the matter thus discharged
is nothing but one of the component parts of the
blood ~~can~~ thrown out of the body in consequence
of the restoration of natural action in the
capillary vessels of the skin, and in the blood
vessels of the kidneys. Again Dr. Cullen ~~places~~ in
his theory of fever places its proximate cause
in a spasm in the extremities of the blood=
=vessels ~~of the skin~~ which terminate in
the Skin. Now ~~no~~ no such spasm takes
place except during the Chilly fit of a

that I include among the false facts, not only such as are derived from observa=tion, but likewise from experiments ~~of~~ made apparently with care, & related with ~~great~~ seeming candor. Of this, our periodical publications ~~daily~~ constantly furnish us with ~~nume=~~ modifying ~~=rous~~ ~~and proofs~~ proofs ~~upon~~ in all the branches of Medicine.

fever, and in all those fevers which come on without a chill, there is no spasm any where. Once more, Dr Brown's theory of fever consists of a supposed debility in the blood vessels. Now this is a false fact, ~~de=~~ ~~bility is only~~ for fever consists in most cases in preter natural ~~stren~~ & morbid strength in the blood vessels, induced ~~only~~ by previous debility. This is obvious not only to reason but to the sense of touch as I hope to prove to you hereafter. — I wish it to be remembered

I might thus go on and show that a hundred other supposed facts upon particular diseases have been called theories which are not entitled to that epithet. It is to be lamented that the errors and fluctuation of theories foun=ded upon supposed facts, have exposed our

Science to the Charge of Uncertainty, and calls even its Usefulness in Question. Of the latter I shall say nothing at present. Of the former I shall only remark that the imperfection of Medicine has been mistaken for its Uncertainty. The instances in which physicians mistake a disease, or form a wrong judgment of its issue in life, or death are ~~so~~ very few. In those diseases which they are unable to cure, they still discover the certainty of our Science by predicting this fatal termination. Our inca=pability to cure all diseases is a proof only of the imperfection of Medicine, but even this imperfection is much less than it is suppo=sed to be as far as it depends upon a phy=sician, for few patients die of ~~incurable~~ common

used as ~~[illegible]~~ proofs of our ignorance or of the imperfection of medicine which ~~[illegible]~~ were probably never intended to be known and if known would afford us no assistance in curing diseases. For example - What ~~[illegible]~~ benefit should we derive from being able to ascertain ~~the~~ whether in a disease in the lungs, its seat ~~is~~ was in the right or left lobe, or whether ~~in~~ a disease of the brain, ~~it~~ occupied ~~the~~ its dura mater or its meninges? ~~The remedies which cure the~~ disease in all those parts is a unit, ~~is~~ ~~a disease~~, and the remedies which cure them all ~~are~~, are exactly the same. A knowledge of course of its precise seat, is no more necessary part of the science of medicine, than a knowledge of the chemical properties of aliment is necessary to enable it to nourish our bodies.

diseases, in which their deaths may not be
traced to delays in applying for medical aid,
bad nursing, or disobedience to medical pre-
-scriptions. — But further - many things are
In admitting the imperfection of medicine,
we place it upon a footing with all other
Sciences. Even the Science of navigation is
still imperfect, and yet we do not upon
that account ~~depict~~ depreciate the ~~advantages we derive~~ the
~~from~~ the Magnet, the Quadrant, and ~~lunar~~
light which the moon ~~who~~ has lately shed upon it.
~~Observations~~ Of the few ships that are lost
at Sea, most of them are ~~the results~~ like
the lopes of patients in ~~incurable~~ common diseases,
the result of ignorance or Carelessness. They
prove the imperfection only, not the Uncer-
-tainty of navigation.

I return from this defence of
theory in medicine, to take notice, that

these are three methods of studying the principles and practice of ~~medicine~~ physic. These are, by means of lectures, by reading, and by attending upon ~~the prac~~ public or private practice.

The mode of communicating knowledge by means of lectures is very ancient. Zeno taught from his porch, Diogenes from his tub, and the Peripatetics in their morning and evening walks. In was in this way chiefly that knowledge was communicated in ~~Colleges~~ ~~and the Schools and Colleges~~ before the discovery of the art of printing. This noble invention has refined in a degree, but has not superseded the necessity of oral instruction in our Schools of Science. Lectures ~~Contain~~ arrange ~~the discoveries of every year collected, and~~ ~~opinions~~ facts and opinions in ~~arranged in~~ such a manner as to suggest ~~impart~~ order and

v of this, we have a ~~[illegible]~~ striking proof
in very old people, who are sometimes ima-
=ble to recollect their friends, and in some
instances ~~that cases will be very known~~
=~~bage~~ even their Children when they meet
them, until they hear them speak.
and 2.ly

method in ~~direct~~, the inquiries of a Student, and ~~and~~ they contain such details of the successive discoveries and improvements that are made ~~speedily~~ in every part of the world as to save him an immense expense in time & books. The knowledge acquired in this way moreover makes a deeper impression upon the mind that ~~the know~~ that which is obtained by silent reading. This ~~impression~~, depends ~~not~~ ~~owing to this has been provided~~ ~~to the greater fidelity of our ears than of our eyes in at~~ and that for an obvious reason knowledge penetrates deeper into it when taken in by the ears than ~~the mind through the mind~~ ~~upon two causes~~ ~~Hence~~ ~~the~~. This ~~and not~~ ~~the eyes and~~ upon two causes [illegible] upon ~~only by~~ the greater fidelity of the ears than the eyes in retaining knowledge; ~~but~~ upon the assistance the memory derives from ~~the~~ associating what is taught with the voice, and manner of the Speaker.

Great as the advantages of oral instruction are in teaching some branches of Science, they ~~as~~ are very much limited in teaching the practice of physic. In a single course of lectures it is not possible to collect, and deliver a hundredth part of all that a physi=
=cian ought to know of the causes, Symp=
=toms and remedies of diseases. There are besides many things in this branch of medicine that ought to be known ~~that~~ cannot be taught from the incompetency of lan=
=guage for that purpose. ~~In what~~ Where shall we find words that are capable of establishing a correct relationship between the different states of the pulse, of the countenance and of the tones of voice, and ~~the~~ ideas of them in the mind of a student of medicine?

V and the memories of other people, our own, and live by a kind of multiplied ex-
-istence whole centuries in the course of a single life.

To ~~aid~~ supply the deficiency of lectures in teaching the practice of physic, recourse should be had ~~to~~ ~~reading~~ 2ly to books. Here we meet with ~~histories~~ the results of the observations and reflections of physicians in different ages & countries, and thereby supply the want of individual experience. ~~We~~ By means of this resource for knowledge we ~~multiply our~~ make the eyes, ~~& our hands~~ — ~~now more we multiply our~~ — ~~relations~~ — But ~~reading~~ with all that can be said in favor of books, ~~books, above are inadequate~~ they are imperfect means of teaching the practice of physic. ~~Such~~ Like lectures, they are ~~They are~~ incapable, from the poverty of language of ~~containing~~ conveying certain ~~notions~~ ideas ~~that~~ are ~~to be~~ acquired only by observation. Many symptoms are ~~and suggested by diseases~~. ~~They are~~ ~~should not~~ omitted in their histories of diseases, and ~~false from~~ a regard ~~Often incorrect from accident or design, be~~ is seldom had to the grade or stage of the disease in which ~~Bacon where this was not the case. they are~~ remedies are prescribed, and even when this is not the case, they are seldom capable of directing the practice of a physician in any other country than

that in which they were written. ~~What shall~~
In support of ~~I have of~~ the correctness of these remarks
~~we say~~ I shall select ~~from many~~ but two ~~instances~~
~~I could furnish many proofs from the great~~
proofs from ~~so many~~ among many hundred
~~commonly and popular authors~~ many
~~hundred, nay from doubt~~ that might be
~~adduced~~ mentioned. There is not a
single history of madness extant in which
it is not distinguished from delirium, by
a natural pulse and the absence of fever.
Now this is so far from being true, that
a febrile ~~pulse~~ or preternaturally frequent
pulse is a characteristic symptom of the
former disease. Again - In ~~no disease history~~ not more that two
or three instances is the state of the pulse as to strength
~~or weakness of the pulse~~ taken notice of in the history of
Dropsies by practical writers. Even its frequency
is seldom mentioned; now ~~the fact~~ I shall
say hereafter that the nature, and seat of
Dropsy can be known, and that it can be cured

V many of them are incorrect from the ~~idleness~~ indolence or ignorance of their Authors, others are mischievous from their containing details of Cases fabricated to serve the purposes of interest or fame, while

It is remarkable, ~~the~~ a ~~similar~~ ~~The fate of medicine in the last particular of these Lessons of error, is not singular. The same~~ disposition to copy, has prevailed in ~~poetry~~ no less than in medicine. poetry & painting. The descriptions of the Seasons in England for ~~many Centuries~~ were copied from ~~the Roman~~ & Greek ~~chiefly from Virgil~~, and Roman poets, and Italian faces only were painted by English Artists for many Centuries. To the pen of Mr Thompson the British Nation is indebted for the first correct description of ~~their~~ Seasons that ever was published, and to the pencil of our Countryman Mr West she owes the introduction of the British Countenance upon ~~her~~ Canvass. In like manner most of the histories of diseases that are contained in British Books are taken from Greek & Roman Authors. Sydenham first atchieved in medicine what Thompson and West effected in poetry & painting. His example has been imitated by Huxham, Pringle=

only by a constant reference to the different states of the pulse.

It were to be wished, ~~that~~ there were no other objections to medical books than those which have been mentioned, but ~~no~~ justice to this part of my subject requires me to add, that many ~~of~~ more of them are ~~worthless~~ useless from containing nothing but transcripts of ~~some~~ common facts and opinions that ~~had~~ have been hackneyed through a thousand papers, & diversified only by novelty in their arrangement or phraseology. ~~Many of them are incorrect~~

Cleghorn, and Tilliary with Surgs. These illustrious men may justly be ~~compared to~~ considered as high priests constantly ~~administering~~ offering ~~up~~ this invaluable writings ~~up~~ for the benefit of mankind upon that part of the altar of nature which is appropriated to the science of medicine.

The 3: mode of acquiring a knowledge of the practice of ~~physics is~~ medicine, is by ~~attending~~ becoming a pupil in ~~the practice of~~ some public medical institution,

or of a private practitioner of physic. In one or both these ways only can be a physician be completely educated. The business of a Student of medicine in either of the above situations will consist in the first place in ~~compounding~~ preparing medi=cines for the sick. ~~He~~ In order to become perfectly acquainted with them he should make up the compounds, such as tinctures, oint=ments, ~~and~~ powders and masses of pills from which the individual prescriptions are prepared. By this means he will acquire a ~~principlicity with~~ knowledge of the sensible qualities ~~of~~ virtues & doses of medi=cines which will never pass out of his mind. In the situations that have been mentioned, he will have access to sick people and thereby be=come intimately acquainted with the causes, symptoms and grades of diseases. For this pur=pose it will be necessary for him to perform certain offices to the sick, without which he will seldom

be permitted to visit them, and from which the principal part of his knowledge will be derived. These offices are Bleeding; applying & dressing blisters, ~~giving injections~~ & sitting up with the sick. —

In the act of bleeding a Student will have an opportunity of perceiving ~~its~~ the effect of the loss of blood upon the strength of a patient, upon his pulse, his pains, his tongue, his skin, his stomach, his bowels and even his mind. — He will discover the force of his disease by the form and color of the stream of blood which issues from a vein, and ~~the~~ by the greater, or less promptness with which the orifice heals from which the blood has been discharged.

~~The~~ ~~[illegible]~~

In dressing blisters he will discover their influence upon the head, the stomach ~~&~~ the bowels &

the Skin. He will perceive that there is a certain state of excitement in the Skin in which they rise most readily, and he will be able to form a tolerable judgment of the nature & duration of the disease by the quality of the fluid that ~~are~~ is discharged from them. ~~He will~~ In respecting the dropsies of them, he will be able to ~~tell~~ tell whether the disease be in an increasing or declining state, and he will ~~accordingly~~ learn to regulate his prescriptions, ~~something~~ by their different appearances when he enters upon the practice of medicine.

[In administering injections the student of medicine will perceive the ~~communication~~ sympathy of the bowels with the whole system - he will discover the ~~dead~~ feeble sensibility of the ~~lower~~ bowels compared with the stomach, to heat, cold and other remedies, and in certain ~~intestinal~~ diseases of the intestines he will observe now and then a proof of ~~their~~ his inverted motions by a rupture of ~~the~~ his glyster pipe, or by it's being absorbed as it were by the bowels]

A physician thus taught in his profession, will differ widely in his practice from one who has acquired all his knowledge from ~~books~~ lectures & books, or by ~~wandering~~ walking hastily through a hospital. He will not throw a stone at a venture at a disease. He will at once close upon it, and from his well cultivated knowledge of its weak parts, he will seldom fail of obtaining a victory over it.

In a word gentlemen I would as soon expect a young man would learn to swim by hearing a lecture, or reading a treatise upon that art without going into the water; as a student of medicine become a physician in any other way than by performing all the offices I have mentioned to sick people.

In sitting up with sick people he will observe the position of the body, the motions of the limbs, the state of the ~~eyes and countenance~~ pulse and the skin and above all the state of ~~his~~ the eyes & countenance in sleep, from which he will be able to find out many things ~~that~~ in the nature and tendency of diseases which can never be discovered in the waking state.

It may be said, all the knowledge ~~to~~ acquired in the ways I have ~~mentioned~~ recommended, may be met with in books, ~~or learned but~~ or obtained from lectures, or picked up from conversing with nurses, but this is by no means the case, and if it were, it would seldom be recollected long enough to be useful to you. The more serious knowledge passes through in-losing the mind, the longer it will be retained. While ~~books~~ lectures and books convey it ~~only~~ only through the medium of the ears, and the eyes, such an intercourse with sick

By means of so many different elements of im=
=pression acting ~~upon the~~ at the same time
upon the mind, a physician is formed as it
were in an insensible manner. From this
exact knowledge of the morbid states of the system,
and of the preparations and doses of medicines
thus obtained, he acquires apparently such
an empire over ~~diseases~~, the ~~actions~~ functions of the
body, that diseases and medicines, shall I dare assert it? seem to
obey him. But this is not all.

people as I have described, conveys it through every sense of the body. — we see ~~the~~ their countenance, ~~&~~ — we hear ~~their accents~~ the tone of their voice, we ~~handle the~~ become familiar with the ~~temper-~~ ~~ature~~, the comparative heat & cold, moisture & dryness of their skins by the sense of touch, — we smell their breath, and ~~the~~ other excretions — and in some instances we taste their sweats ~~to~~ ~~con their skin~~ with advantage. ~~Under the influence~~ By ~~means of a many different~~ currents ~~of so many circumstances~~ ~~particular~~ acting upon the mind at the same time, ~~of~~ ~~bad~~ impressions a physician is formed as ~~it were, in a manner~~ ~~almost~~ ~~impossible~~ ~~this~~ ~~see~~ from the effects of habit it has been said a button maker becomes a button, and a buckle maker a buckle in some of the manufacturing towns ~~in England~~ Great Britain. In like manner ~~intercourse~~ from ~~from the~~ a similar ~~intercourse~~ intercourse with sick people, a physician becomes as it were a medicine. He is so completely and promptly accommodated ~~to~~ in mind &

There is a reason for this conduct which operates with peculiar force in this country. From the difference ~~in the~~ which climate, diet, and manners impose upon our diseases, from those of Great Britain and other foreign countries, it will be unsafe ~~to~~ implicitly to follow their writers, and as yet we have not a sufficient number of practical publications in America to supply their place. In this state of medicine there is nothing left for the student, but to become his own teacher and ~~expand all the faculties of his mind, and observe and think and act for himself~~ to rely exclusively ~~the~~ upon the resources of his own mind.

body to ~~many~~ the changes & symptoms of diseases, that ~~of~~ his very presence in a sick room is a remedy for them. Even his name infuses vigor, ~~hope~~, and confidence into the minds of his patients, ~~depending minds~~ and thereby often cures their ~~bodily~~ diseases. —

It was said in an eulogium by the Duke of York upon the late ~~after~~ ~~late British hero~~ Sir John Moore that he "lived with his troops." In this way he acquired his consummate military knowledge, and from this source he ~~became~~ derived that ~~immense~~ stock of merit and fame that drew tears from a whole nation when he fell. In like manner ~~if~~ a ~~physician wishes~~ student of medicine wishes to be ~~eminent of~~ at the head of his profession, to be honoured while living, and lamented ~~with~~ when dead, he must live among sick people. ~~as well~~

Let it not be said that a student of medicine will degrade himself ~~by preferring~~

From the Writings of Hippocrates & Sydenham it would seem they were not only good apothecaries, but excellent Cooks & messes, and it was probably by combining those characters with that of a physician, that they became such great benefactors to the health & lives of ~~mankind~~ this fellow creatures. But further —

~~the offices I have mentioned~~ into the humble con-
-dition of an Apothecary or a Nurse ~~[illegible]~~ by
performing the ~~[illegible]~~ offices I have mentioned.
There is no dishonor ~~in~~ in a physician's being a good apothe-
-cary, on the contrary, they is ~~great dis-~~ both honor
~~honor in~~ and profit in it. The hands of Cullen, Rutherqill,
Hughson Thick and Watson ~~all passed thro' an apotho-~~
~~-carios shop~~ were familiar for many years
with the pestle and mortar, the lancet & all the
other instruments for ~~attending~~ relieving the
distresses of sick people before they entered
upon the higher studies and duties of the
profession ~~and by this~~ of medicine. ~~in which~~
~~they all became the peculiarly eminent de-~~
~~-ceased~~. As far as my observations have
extended, I do not know an instance of a
physician any where who has arrived ~~at~~ to
eminence in his profession, who has
not passed thro' an apothecaries shop

on his way to it ~~his elevation to it~~. ~~Waters~~,
~~both the Hutchinsons, Cooper, Horsefield~~
among the Graduates in our University, ~~the~~
Waters, ~~the~~ two Hutchinsons, Cooper, Horse=
=field, and ~~many~~ several others, who might be
named occupy the first rank for practical
knowledge in medicine, and ~~these~~ all ~~all~~
all ~~have~~ spent five or six years in perfor=
=ming ~~the~~ the Duties of Apothecaries in the
Pennsylvania hospital. Indeed ~~so~~ far ~~does~~ is
a practical knowledge of those Duties ~~disgraceful~~ from being disreputable,
~~that~~ to be ignorant of them is disgraceful
to a physician, if that title can be justly
applied to ~~such a person~~ him. A plain
farmer in England once rambled into a
public room, where he saw three gentlemen
clad in the robes which characterize the
Church, the Army & the bench of that Country.

Struck with their appearance he cried out, "See there a minister of the gospel, a soldier, and a lawyer sitting together". "You are mis=taken (said a person who heard his speech) The man whom you suppose to be a minis=ter of the gospel is a bishop, - the man whom you suppose to be a soldier, is a general, & the man whom you suppose to be a lawyer is a judge." "Ah! my poor country" said the farmer what will become of you when you are in the hands of a bishop who is no minister of the gospel, of a general who is no soldier, and of a judge who is no lawyer". With equal propriety may we say, what will become of the health & lives of the citizens of the United States, should they be committed to the care of physicians who

lessen the expenses of Sickness to our patients, and at the same time, increase, ~~the~~ in a moderate degree, the profits of our ~~labors in attending upon~~ attendance upon them. It was in part to answer these purposes, and to save themselves from greater evils, that the physicians have lately been obliged to resort to the duties of the apothecary in many parts of Great Britain. In so ~~doing~~ doing they =

are not apothecaries?

There remains one more reason to be no=
=ticed in favor of combining the duties of the
apothecary with the physician, and that
is, it will ~~prevent~~ prevent the profits of our
profession being divided with men who are
not entitled to ~~it~~ them, and thereby lessen the expenses
of sickness to our patients. This has of late years
become so much the case in great Britain
that physicians have been compelled ~~to~~ in
many places to lay aside all the dramatic
paraphernalia of their profession, and to
resort to the duties of the apothecaries in order
to procure their livings. ~~It is in consequence~~ In this, they
~~of Dr Gregory of Edinburg having expressed let us~~
~~learn wisdom by their own conduct, for~~ have acted ~~writers~~ wisely, for it is a fact,
the greatest part of the profits of ~~the~~ our
profession are derived from services which an
~~old~~ apothecary, or even an experienced
nurse

is as able to perform as the most skilful physician.

All that has been said in favor of studying the history & cure of diseases ~~medicine~~ by means of an intercourse with sick people applies with equal force to the study of surgery and midwifery. — ~~The~~ The fingers must aid the eyes and the ears in acquiring a knowledge of them. Say not they are ~~un~~ unnecessary branches of a medical education. — They form a part of ~~that circle in which~~ the great circle of medicine and ~~upon the practice of physic~~ ~~upon the sciences of medicine~~ ~~a physician~~ ~~the sciences~~ reflect ~~so~~ large portion of light upon the practice of physic, ~~and so intimately connected are all the objects of both of them that a with the knowledge and cure of diseases~~, that a man cannot be a physician who is ignorant of them. Say not further — that you do not ~~intend~~ intend to practise them. Your lot may be cast into situations in which you ~~will be~~ may have no election upon this subject, and if this should not be the case, humanity may

now I then make it necessary to save your ~~profes~~ moral as well as your professional character. There is no national Vanity in admitting the accounts which have been ~~adopted by the~~ ~~praise which several of the nations of Europe have given ~~ascribed to the state of medicine in published of the improving~~ published in several European countries of the improving state of medicine in the United States. ~~I describe them chiefly to the~~ They are ~~to be ascribed~~ I believe strictly true, and they are to be ascribed chiefly to the influence of luxury, not having as yet dispel=ved the early and natural Union of the professions of physic, Surgery & midwifery in this country. —

While I thus urge the necessity of cultiva=ting a familiarity with diseases by attending ~~the~~ to public or private practice, do not suppose I wish to lessen your diligence in reading & attending lectures. On the contrary, ~~they will both assist you in profitting by your attendance upon~~ permit me to recommend each of them to you

in the strongest terms. They will ~~render your~~ ~~mentally afflict~~ render your attendance upon sick people more useful to you by directing your attention to objects that might otherwise escape your notice, and they will serve to correct mistakes from which even observation ~~sometimes~~ does not always exempt the human mind. ~~The~~ ~~danger~~ mistakes to which you will expose from reading and attending lectures will in like manner be corrected by your familiarity with diseases. — You will perceive the immense difference between the descriptions of them in books, and as they occur in real life. You will particularly be struck with their ~~want of~~ dissimilarity, ~~to the diseases of the United States~~ as described ~~in~~ by British and ~~by~~ East & West India Authors, to the Diseases of the United States.

I have thus gentlemen briefly pointed out a ~~method~~ mode of studying medicine which I conceive to be ~~best suited to the present state~~ best suited to promote all the benefits and blessings our profession is capable of conferring ~~of society and manners in the United States~~ upon mankind. —

It remains now only to mention the time that will be necessary to acquire such a knowledge of it as will qualify a young man to practise it with safety to his patients & honor to himself. —

From a review of the ~~nat~~ number & nature of the branches of ~~medicine~~ science with which it is necessary for ~~the~~ a student of medicine to be acquainted, and from the slow and gradual manner in which knowledge can only be obtained in some of them, it would seem one half of an ordinary life would scarcely be sufficient for that purpose. However ~~—~~ imperfectly lectures teach, two or three courses of ~~them~~ each of them

~~But~~ It is common to recommend the study of the works of the Ancient ~~P~~ Greek and Roman Fathers in medicine, but this is much less necessary now than it was an hundred years ago, since nearly every thing valuable in them has been translated and quoted in modern books. The writings of Hippocrates & Celsus may however still be read with advantage not so much upon account of the knowledge that is still retained in them, as as to acquire the happy art of correctness in observing, and fidelity in recording the Symptoms of diseases. It will be useful for a Student to

should be attended, by every student of medicine,
nor should the errors, or even falsehoods
contained in medical books prevent his
reading them. ~~These are for the~~ The most erro-
-ous of them ~~these~~ will be found many
useful truths. ~~that the number of~~ Such of the Grecian & Roman
fathers in medicine as are translated into En-
-glish language should be read by them pas-
-sionately all the works of ~~Hippocrates~~ ~~and~~
~~should~~ ~~library~~ make himself acquainted with anci-
-ent and modern systems of medicine, but
above all,
he should read ~~so all the practical works~~ every treatise upon Epidemics ~~ancient and modern~~ whether
to which he can have access ~~in many languages~~.
~~and~~ written in his own or foreign countrys.
In the most erroneous of ~~these works so~~
these works he
will find many useful truths, ~~but~~ and
even ~~this~~ the errors he will ~~some to~~ discover in
them ~~will~~ will sometimes suggest ~~some and these suggest~~
~~an useful idea~~ ~~may~~ be found to be truths

V a young man educated & graduated in less time, is for the most part an abortion in medicine. –

out of their proper places. ~~Two~~ Four years will
barely be sufficient ~~for~~ to accomplish ~~ed~~ what
has been mentioned, three of which should
be spent in attending the practice of a ~~private~~ private
physician, ~~of~~ or of a public hospital. I am
aware that ~~a young man~~ he may learn ~~in a much shorter time~~
in two or three years to
answer all the questions that are usually
asked at an examination for the degree
of Doctor of medicine, for these are confined
wholly to the lectures which he has attended,
But ~~as~~ is the knowledge contained in these
lectures all that ~~ought~~ should to be known by a
physician? By no means; and however
strange it may sound, I think I have ob=
=served in ~~known~~ some instances that in proportion
~~as some of the~~ as candidates have answered
correctly upon the subjects of the lectures, they
have been deficient in reading & practical

V Shoemaker, or the taylor that undertakes
to exercise his trade,

knowledge. This is the natural consequence of but two or three years application to the study of medicine. A longer term of study would have their ~~qualifications~~ attainments equally respectable ~~they~~ ~~render them equally correct in all~~ ~~the~~ ~~ing~~ ~~that~~ kind of ~~chem~~ knowledge that is derived from books, and ~~an intercourse with~~ attending upon sick people.

Where is the ~~mechanic~~ ~~that undertakes to make a~~ ~~coat, or a pair of boots~~ ~~walks to build a house, or to make an apparatus of the exercise of his art~~ ~~without a previous apprentiship of five or six years?~~ and ~~whose~~ ~~is the man that~~ shall ~~it~~ less time be spent in learning ~~the~~ all the fundamental and practical branches of our Science that are necessary to cure diseases? Is health less valuable than a pair of shoes, and is life less precious than a suit of cloathes?

~~May not Universities never become the hotbed of such physicians, and~~ students, ~~may a spirit of rivalship between~~ for numbers of ~~vain~~ in our medical Universities, never permit their

v and who are wholly ignorant of the practical ~~& mechanical~~ & manual parts of medicine, and even of the sensible qualities of the most common articles of the materia medica,

honors to be prostituted, ~~and~~ by conferring them upon men whose knowledge consists only in words and definitions, but if in spite of the ~~and in any case~~ the Dictates of reason, of patriotism, of humanity ~~Laws of our States protect the lives of our and of Innocence~~ this ~~citizens from the ignorance, but if this~~ should ~~[illegible]~~ be done, — Gracious Heaven! arrest ~~this~~ this murdering hands, and save, oh! save our citizens from such ~~butchers~~ exterminators of the human race! —